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THE USE OF BENCHMARKING PRACTICES IN ACHIEVING COMPETITIVE ADVANTAGE IN KENYAN UNIVERSITIES

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Benchmarking is a continuous analysis of strategies, functions, processes, products or services and performances with the intention of assessing an organization's current standards and thereby carrying out self-improvement by implementing changes to scale or exceeding those standards. This study sought to carry out a comparative study to examine the extent to which benchmarking practices are used in Kenya universities to achieve competitive advantage. The study used four universities, two in the public and two in the private sector. The study objectives were to identify reasons for initiating benchmarking, to assess the level of success in benchmarking and to assess the effect of benchmarking in achieving competitive advantage in Kenyan universities. The methodology included descriptive research design. Universities were stratified into public and private. The target population consisted of full time lecturers numbering 1114 drawn from the two public and two private universities selected using stratified purposive sampling. Respondents from various schools were then sampled using simple random method. A pilot study was carried out on a sample of 29 lecturers using test-retest in order to establish the reliability of questionnaires. Data was collected using semi-structured. Data was analyzed using statistical analysis generated using the computer application package SPSS version 20. Methods used to analyze data included descriptive statistics and linear regression. A response rate of 198 was recorded. For all universities the findings indicated that Kenyan universities mostly practice external or competitive benchmarking, universities practice benchmarking for continuous improvement and competitive advantage, universities had been successful in using benchmarking as a strategic tool, and for assessment and improvement of performance as well as quality improvement. Benchmarking was found to have a significant and positive impact on achieving competitive advantage in both public and private universities. Public universities were found to be more successful in implementation of benchmarking practices and had a greater competitive advantage than their private counterparts. The study recommends that universities could adopt other approaches to benchmarking even with non-educational institutions. Benchmarking practices that emphasize on people management should be encouraged since human resources are the most important resource in any organization and benchmarking cannot succeed without them. It is also critical that university academic staff are sensitized on benchmarking practices so that the university administration can earn buy-in from them to facilitate greater success and become more competitive.

Keywords: Benchmarking, Competitive Advantage

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INTRODUCTION

Benchmarking is the process of identifying, understanding, and adapting outstanding practices from organizations anywhere in the world to help an organization improve its performance (Kumar *et al.*, 2006). Anand and Kodali (2008) defines it as a continuous analysis of strategies, functions, processes, products or services and performances with the intention of assessing an organization's current standards and thereby carrying out self-improvement by implementing changes to scale or exceeding those standards. Using the (Camp, 1985) typology there are four different types of benchmarking which consist of: internal benchmarking, competitive benchmarking, functional or industry benchmarking, and process or generic benchmarking. Before deciding to benchmark, a company needs to determine what it is they want to benchmark

Internal benchmarking is a comparison among similar operations within one's own organization. Within the university this would involve comparisons of departments, campuses or sites in order to identify best practices in the institution without having an external standard against which to compare results and is ideal where constituent colleges exist (Alstete, 1996). This is a starting point for organizations, since organizations must understand their own services or processes before they can be compared to others. Internal benchmarking activity establishes operating standards within organizations (Spendolini, 1992). The benefit of immediate gain comes from identifying the best internal procedures and being able to transfer them to other portions of the organization. Unless it is later used as a baseline for external benchmarking, companies implementing this type can often retain an

introverted view (Matters and Evans, 1997).

External competitive benchmarking involves comparison of performance in key area based on information from institutions seen as direct competitors. This activity follows an internal benchmarking activity, since the internal information must be gathered and analyzed before it can be compared to external data (Fink, 1988, Yassin and Zimmerer, 1995, Camp, 1989). Done externally, competitive benchmarking's goal is to compare organizations in the same markets which have competing products, services, or work processes (Finch and Luebbe, 1995).

Functional or industry benchmarking is performed externally against industry leaders or the best functional operations of certain organizations. The benchmarking partners are usually those who share some common technological and market characteristics. They also seem to concentrate on specific functions. Because there are no direct competitors involved, the benchmarking partner is more willing to contribute and share. A disadvantage can be the cost and scheduling of the already overwhelmed benchmarked companies (Matters and Evans, 1997).

Process or generic benchmarking focuses on the best work processes where the similar procedures and functions are emphasized. It involves a comparison of work processes with others who have innovative, exemplar work processes and can be used across dissimilar organizations. It requires a broad conceptualizing of the entire process and careful understanding of the procedures (Elmuti and Kathawalla, 1997, Achtemeir and Simpson, 2005).

Smith *et al.* (1999) add metric benchmarking which is based upon comparisons of certain

performance data which are perceived to be important and relevant. Individual organizations can evaluate their performance in relation to that of the leading performers. This however is more concerned with what constitutes good performance rather than how it is achieved, it may help organizations pinpoint certain aspects of performance to improve but gives little guidance in the process of learning to improve.

Matters and Evans (1997) outline five stages included in the benchmarking process that include planning the exercise which involves identifying the strategic intent of the business or process to be benchmarked; obtained by looking at the company's mission statement which summarizes its main purposes. Selection of the actual processes to be benchmarked must be chosen followed by the identification of customer's expectations and finally, the critical success factors linked to successful business results. A benchmarking team is chosen from various areas of the organization where all members should cooperate and communicate with one another in order to get the best results out of the benchmarking process. There are three main teams comprising the overall group, the lead team responsible for maintaining commitment to the process throughout the organization, the preparation team responsible for carrying out detailed analysis, and the visit team which carries out the benchmarking visit.

Data collection which involves gathering information on best practice companies and their performances. An organization first identifies their own processes, products, and services which allows them to fully realize the extent of improvements available. Site visits are also an important factor in collecting data because they allow for a more in-depth understanding of the

processes. Data is analyzed for gaps by determining how the organization relates to the benchmarked company; this allows identification of performance gaps and their possible causes. Action is taken and this step involves determining what needs to be done in order to match the best practice for the process. Determination of changes should be made, and also implemented (Matters and Evans, 1997).

BENCHMARKING IN HIGHER EDUCATION

Benchmarking, as a process for self-evaluation, was adapted to higher education in North America in the early 1990s (Alstete, 1995; Farquhar 1998), Australia (Massaro, 1998) and more recently the UK (Lund, 1998; QAA 1998 and Jackson and Lund, 2000) and continental Europe (Schreiterer, 1998). In the UK benchmarking in higher education began in the early to mid-1990s. The method was initially applied to the management of services like library, facilities, estates, energy and treasury (Lund, 1998), but interest in the technique has grown rapidly over the last two years to the point where it is likely to become a significant tool for the management and improvement of quality and standards in most areas of higher education. Benneworth (2010) noted that benchmarking has emerged as a complementary approach to contribute to making sense of how European universities are progressing towards being autonomous and competitive institutions which use public funds effectively and efficiently and optimize their wider societal contributions economically, socially, politically and culturally.

University benchmarking involves providing the institution with an ambition for improvement, to look at a set of comparators and acknowledge

that they could be managed more effectively. The university must also understand why the benchmark works better by comparing the processes by which the various organizations deliver particular outcomes. This is followed by a response to the diagnosis of the problem and developing a strategy for organizational development (Benneworth, 2010).

Johnston and Media (2000) and Vlasceanu *et.al.* (2004), identified types of benchmarking in European universities which include internal benchmarking between different departments, campuses or sites within a university in order to identify best practice in the institution, without necessarily having an external standard against which to compare the results. External competitive benchmarking involves comparison of performance in key areas based upon information from institutions which are seen as competitors and those who are not immediate competitors.

Gunasekaran (2002) found that Global competition and information technologies are changing the methods of how educational institutions function in India and to implement substantial changes in efficiency and productivity of education, benchmarking as a new approach to improve efficiency and encourage continuous improvement must be integrated into institutional systems. According to Charles and Benneworth (2002) benchmarking may cover the variety of actions undertaken by a heterogeneous set of universities where each can identify at least some areas in which it can be successful, rather than being assessed against a few externally selected criteria. Benchmarking approaches have been developed which use qualitative as well as quantitative indicators, process measures, and leading and lagging indicators. They can therefore

help to identify if good practices are being adopted and allow the combination of different forms of measurement, and models of performance.

According to Garlick and Pryor (2004) benchmarking in Australian Universities has been largely restricted to an assessment of administrative function rather than focusing on teaching and research, and has not been used for organizational improvement. One of the main problems with benchmarking between universities has been a lack of consistency in the benchmarks used and the method of measurement, rendering comparison very difficult. Garlick and Pryor (2004) further characterize benchmarking in the university as collaboration, organization learning, inclusiveness, reflection, review, leadership and improvement. It also involves assessing the quality and cost performance of practices and processes in the context of industry-wide or function-specific 'best practice' comparisons. Garlick and Pryor (2004) add that universities seek to benchmark in areas such as increasing enrollment and student: staff ratios, introduction of competitive programs, research institutions, provision of quality teaching facilities, establishing linkages and collaborations with industry, research, clear governance structure, as well as community outreach and extension.

McKinnon *et al.* (2000) suggest its use to provide senior staff with tools to ascertain performance trends in the university and to initiate continuous self-improvement activities. Universities and Higher education institutions have an increasing need to benchmark their performance against their peers and benefit in form of development of the institution's strategy and identify new trends early and gain advantage over others. Researchers McKinnon *et al.* (2000) provides a useful summary of the main

approaches to the formulation of benchmarks by distinguishing criterion reference approach which defines the attributes of good practice in a particular area, thus enabling universities to benchmark their success in that area through a direct comparison of their performance against the criterion. In contrast, quantitative benchmarks distinguish normative and competitive levels of achievement, enabling assessments to be made of differences in practice between institutions.

Hong Kong universities have tried to benchmark with top universities in the world, though they are struggling to compete for limited resources Mok (2005), in order to gain international ranking. Mugenda (2011) in her presentation at a UNESCO Global forum suggested that benchmarking is inevitable as it helps universities stay competitive by transforming organizations processes into strategic tools, helps higher education institutions to compare systematically their practice and performance with peer institutions. Magutu *et al.* (2011) in their study of benchmarking in Kenya's public universities found that public universities use action research and performance indicators as the sources of referencing information on benchmarks but success has been minimal. Critical factors that have influenced the success of benchmarking practices are time and resource availability, limited duration, and compatibility, which explain why the institutions don't practice international benchmarking.

STATEMENT OF THE PROBLEM

Kenyan universities carry out little benchmarking with other institutions, a practice which would help

them identify and adopt good practices. A study carried out by Magutu *et al.* (2011) found a big gap which needs to be filled through benchmarking to make Kenyan universities international centers of excellence. According to Ng'ang'a (2012) Kenyan universities have slipped in ranking worldwide indicating a low level of lecturer performance and consequently low competitive advantage. In 2014, the best ranked university by University web ranking was position 9 in Africa while the second was ranked position 34.

A competitive university is beneficial to the social, economic and political development of the country towards realization of Kenya's vision 2030. Kenyan parents spend money to provide university education for their children; it costs about 800,000 Kenya shillings to complete an undergraduate program under Module 11 system or at a private university (Riechi, 2010). Universities engage local, regional and international partners in research, innovation, capacity building and staff and student exchange. All these stakeholders would benefit from a university that has an effective benchmarking system that enhances its competitive advantage.

Kenyan universities have been accused of churning out low quality of graduates who according to Mabururu (2011) are not adequately prepared for the job market in line with market needs and vision 2030. Moreover with reduced government funding, rise in student enrolment, thinning job opportunities, the university administration need to establish what other institutions do to facilitate innovativeness and research and give their students a global view so that they can have a head start in the job market as well as in entrepreneurship.

Specific Objectives

1. To identify reasons for initiating benchmarking in Kenyan universities.
3. To assess the level of success in benchmarking at Kenyan universities.
4. To assess the effect of benchmarking in achieving competitive advantage in Kenyan universities.

LITERATURE REVIEW

Reasons for Benchmarking

The need to be efficient and cost-effective, in order to optimize the resources available to support learning, has continued to be great and benchmarking is one method higher education institutions can use to help themselves achieve this objective and to demonstrate to funding partners that they are providing value for the investment (Epper, 1999). Massive expansion in the number of students coupled with a rapid increase in the diversity of educational provision offered by universities and colleges has resulted in a public concern for academic standards. In the United Kingdom the report of the National Committee of Inquiry in Higher Education (1997) recommended that higher education develop benchmarking methodologies as part of a new policy framework for assuring academic standards. Association of commonwealth universities suggested that universities benchmarked to compare themselves with others thereby identifying strengths and weaknesses and learning how to improve.

In the global market of higher education there are clearly competitive advantages in establishing and maintaining a reputation for providing good quality education, high academic standards and world-class research output. Universities are

under increasing pressure to show how they perform relative to universities in the global community and there is growing interest in transnational benchmarking to make reliable international comparisons and learn from other higher education systems (Lund and Jackson, 2000; Mackie, 2000; Fielden and Carr, 2000). Studies by Brah *et al.* (2000), and Kumar and Chandra (2001) established that organizations benchmark for maintain and increasing competitive advantage, continuous improvement while Magutu *et al.* (2011) found public universities in Kenya benchmarked for continuous improvement, development and for regulating data.

Benefits of Benchmarking

Benchmarking is the process by which companies look at the “best” in the industry and try to imitate their styles and processes. This helps companies to determine what they could be doing better. The decision to begin benchmarking is valuable to organizations by opening up many different ideas to processes, approaches, and concerns (Allan, 1997).

Organizations benchmark for a variety of reasons which include increasing productivity when they look outside of themselves and are able to identify breakthroughs in thinking. A similar process used in a different way can shed light on new opportunities to use the original process (Muschter, 1997). Benchmarking is also beneficial as a strategic tool and it is possible to get a jump on competitors by using new-found strategies which opens up opportunities for growth that the competitors may not be aware of.

Benchmark also enhances learning when the organization hears about another’s processes and how they are working which help employees

to believe that there may be a better way to compete (Brookhart, 1997). Benchmarking may also cause a necessary change in the culture of an organization when it becomes necessary to look outside its walls for potential areas of growth which tends to be a future oriented company. Benchmarking allows organizations to understand their own administrative operations better, and marks target areas for improvement and is an ideal way to learn from other companies who are more successful in certain areas. Benchmarking can eliminate waste and help to improve a company's market share (Allan, 1997).

Organizations that use benchmarking strategies achieve continuous improvement as they establish methods of measuring each area in terms of units of output as well as cost. In addition, benchmarking can support the process of budgeting, strategic planning, and capital planning (Lyonnais, 1997). Benchmarking also allows companies to learn new and innovative approaches to issues facing management which, in turn, provides the basis for training. Benchmarking highlights problem areas and the potential for improvement, providing an incentive to change, and assists in setting and formulating plans and strategies (Meade, 1998). Benchmarking acts as vehicle to improve performance by assisting in setting achievable goals that have already been proven successful (Fuller, 1997).

By using benchmarking, universities can define areas in which they are successful as compared with their peer groups, recognize areas they need to improve, and tailor strategies that will work better for their exclusive organizational circumstances. Burquel and Van Vught (2009) suggested that benchmarking has a strong added-value as a modern instrument and

management tool to support leaders in higher education with strategic decision making based on systematic data gathering for organizational improvement in order to set targets for increased performance. Benchmarking provides every institution a tool to remain competitive according to Sorensen *et al.* (2005) while Alstete (1995) proposed that benchmarking can help overcome resistance to change that can be very strong in conservative organizations, such as colleges and universities, that have had little operational change in many years.

However, Barak and Kniker (2002) who studied US higher education found reasons why universities do not adopt benchmarking which include the commitment of state boards to long-range planning and strategic planning, understaffing, institutions that are currently making peer comparisons express frustration at the limited compatibility of such data. Elmuti and Kathawala (1997) added that the introduction of benchmarking in organizations provides benefits such as job satisfaction tool when benchmarkers have bonded together and developed networks to share methods, successes and failures with each other while Jarrar and Zairi (2001) found that in UK universities benefits included process improvement, setting internal standards and quality improvement. According to Gunasekaran (2002) benchmarking is used for improving administrative processes as well as instructional models, helps to overcome resistance to change, provide a structure for external evaluation, and create new networks of communication between institutions where valuable information and experiences on teaching and research can be shared. Magd (2008) established the most important benefits derived from benchmarking in Egyptian organizations are improved customer satisfaction, quality improvement,

Challenges to Benchmarking

Challenges to benchmarking established include the fact that benchmarking requires a significant commitment of resources such as people, time, and money, without any guarantee that there will be any positive results. Henczel (2002) and Cassell *et al.* (2001) organizations chose not to benchmark due to the lack of time and resources. Other limitations were difficulty in finding a suitable partner (Holloway *et al.*, 1999) while Brah *et al.* (2000) indicated misperception of the need to benchmark, failure to link benchmarking to strategic priorities; lack of understanding the benchmarking concept in Singapore.

Modeling and measuring university processes is extremely tricky as there is a risk of simply comparing what can be measured rather than identifying areas for strategic university improvement (Garlic and Pryor, 2004). Moreover universities are very complex institutions with a huge degree of variety between institutions in terms of size, mission, profile, markets and focus, faculties within one university that may make comparison contentious. Universities also operate in a quasi-market environment where there is some competition between institutions alongside collaboration and strong regulation at national level giving rise to qualitative different kinds of institution that are not necessarily comparable. Another limitation to benchmarking is that universities traditionally do not think in process terms but rather in terms of the task they deliver such as teaching, research, development of higher level skills or simulation and innovation. Pfeiffer and Sutton (2006) argue that people copy what others do instead of how they *think* thus end up benchmarking the wrong things. Organizations often have different strategies and different competitive environments, all of which make what

they need to do to be successful different from what others are doing.

Elements of Benchmarking

Sheffield Hallam University (2003) identified essential elements of benchmarking as continuous and suggests benchmarking should not be treated as a one off exercise but incorporated into the regular planning cycle of the organization and the management of key processes. Benchmarking should be a systematic methodology since it is important to ensure that a consistent methodology is adopted by the organization and that it is actually followed. Benchmarking helps to identify the gaps that exist between current performance and best practice and also how best practice performance has been achieved but in order for improvement to occur, a set of actions must be implemented. Organizations should also seek to identify best practices in order for benchmarking to be successful. Benchmark is also seen as a team activity. Well-trained teams make better decisions than individuals. Therefore, the element of teamwork represents a further advance toward improved quality, productivity and customer satisfaction. Teamwork also includes expanded knowledge and practice of those skills which contribute to maximum team effectiveness. Finally, the provision of quality management tools and associated training and facilitation, will help teams develop the knowledge necessary to continuously improve the systems and processes in which they operate. Most universities have adopted total quality management, a holistic management philosophy aimed at continuous improvement in all functions of an organization (Demirbag *et al.*, 2006). Benchmarking is seen as a pillar of total quality management and its adoption is significantly linked to TQM (Sajjad and Amjad, 2012).

Competitive Advantage

Sustainable competitive advantage is the ability to offer superior customer value on an enduring or consistent basis, a situation in which competitors are unable to easily imitate the firm's capacity for value creation (Anderson, 1994). Porter (1996) posits that maintaining competitive advantage is a constantly moving target and the source of competitive advantage will shift over time therefore organizations must be flexible in order to respond rapidly to competition and change. It arises from competencies and can be used in parallel with the organization's strategy (Hofer and Schendel, 1978). Competitive advantage means having low costs, differentiation advantage, or a successful focus strategy and is created through human resource management practices that include an effective appraisal system. Performance appraisal systems can be used to encourage employees to learn and share their knowledge with others. These intellectual capital resources are acquired through the process of organizational learning and are seen as being extremely important for sustaining competitive advantage in today's competitive environment (DeNisi, 2000)

When a firm is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors, then we can say the firm has a competitive advantage. And when a firm is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy, then we can say the firm has a sustained competitive advantage (Barney, 1991). Fisher (1996) found benchmarking to be among the key elements that are essential for reengineering an organization's business

processes. Benchmarking is the most powerful technique for gaining and maintaining competitive advantage according to Codling (1996) and is a key process used widely as an improvement technique within business excellence models. Hinton *et al.* (2000), when addressing the rapid adoption of business excellence models across Europe, state that organizations striving for business excellence would be hard pressed to do so effectively without benchmarking.

A world-class university which is competitive and sustainable is described as an excellent research institution, a place where the best academics want to be and enrolls only the best undergraduates, has a low student/faculty ratio and excels in a large number of disciplines (Tremblay, 2000; Altbach, 2003; Lagrosen *et al.* 2004; and Salmi, 2009). According to Neef (2005) such a university has excellent research and teaching facilities, an international outlook with international professors and students, enjoys substantial funding to support the research and teaching activities, is part of and makes effective use of international networks and alliances and produces well-qualified graduates who are in high demand on the labour market. A world class university according to Alden and Lin (2004) has a first class management team with strategic vision and implementation plans and continually benchmarks with top universities and departments worldwide and has the confidence to set its own agenda.

METHODOLOGY

The research design adopted by the researcher for this study was descriptive. This design was adopted because it involves extensively observing and describing performance appraisal systems and their uses in public and private universities

without influencing it in any way. Descriptive studies report summary data such as measures of central tendency including the mean, median, and mode, deviance from the mean, variation, percentage, and correlation between variables. According to Mugenda and Mugenda (2003) descriptive design involves sampled elements and the variables simply observed and stated as they exist to determine the current status of that population and as Kothari (2008) adds it has provision for protection of bias and maximized reliability. Creswell (2002) adds that one could adopt a comparative descriptive design where the researcher describes two or more groups of participants and explores for differences.

The target population was 1114 full time academic staff from two public and two private universities within the Republic of Kenya (CHE 2011). The universities included Kenyatta University, Masinde Muliro University of science and Technology, Daystar University and Mount Kenya University. In each category one university is relatively old while the other is relatively young to establish whether being new would differ or be parallel with established ones in terms of competitiveness. Universities were stratified into private and public to constitute two sub-groups after which each stratum was sampled as an independent sub-population out of which individual elements were selected randomly (Groves *et al.*, 2009). A questionnaire was designed and administered to the full time academic staff. It was chosen as it provides a more comprehensive view than any other research tool and is able to collect data from a large number of respondents (Kombo and Tromp 2006). It allows the researcher to control and focus responses to the research objectives thus, enhancing relevance of data collected. Questionnaires are also easy to

analyze and most statistical analysis software such as SPSS can be used to process them.

The researcher with the help of assistants delivered the questionnaires to the sampled schools and issued to the respondents. They were collected on the same day or on appointment within the period of data collection through the office of the dean. Data was cleaned and edited to eliminate errors and omissions then coded in to numerical representations so that a series of statistical analysis could be performed using the software application package SPSS version 20. The researcher used descriptive statistics to summarize the data generated by the survey in terms of the distribution of responses for each variable and the relationships between variables. The researcher calculated frequencies to establish how many people answered each question with each particular response (Anderson *et al.*, 2007). The distribution of responses for the independent variables, and the dependent variable were summarized using frequency tables. Measurements of central tendency namely mean which is the sum of the individual scores in a distribution, divided by the number of scores was also used. Linear regression analysis was also used to estimate the effect of benchmarking on competitive advantage in public and private universities.

RESULTS AND DISCUSSION

Study findings based on each objective are presented below.

Types of Benchmarking

Respondents from both public and private universities were asked to indicate the types of benchmarking carried out in their universities. The dominant approach to benchmarking was

Table 1: Types of Benchmarking

Type of benchmarking	Mean	MI (%)	I (%)	N (%)	U (%)	HU (%)
Internal	(3.24)	0	38.9	48.5	10.1	2.5
External/competitive	(4.21)	35.9	52.0	9.6	2.0	0.5
Functional/industry	(2.62)	0	30.3	15.2	40.4	14.1
Generic/process	(2.12)	0	18.7	11.6	32.8	36.9

KEY: MI-Most important, I-Important, N-Neutral, U-Unimportant, HU-Highly Unimportant

external as shown by 87% of respondents who felt it was important. 63% of respondents considered generic or process benchmarking as the least important while 48.5% felt internal benchmarking was neither important nor important. External benchmarking with similar organizations had a mean of 4.207 indicating that it was the most widely used while generic/process benchmarking scored a mean of 2.12 showing that it was least used. This finding concurs with Magd (2008) who while studying Egyptian organizations found that 64.5% of respondents reported that competitive external benchmarking was widely practiced followed by internal benchmarking at 17.4%.

Reasons for Benchmarking

Respondents were asked to indicate the reasons why their universities adopted benchmarking. In the public universities 83.2% found public concern for academic standards as important followed by 82.5% who felt need to maintain competitive advantage was important. 70.3% felt the need to achieve continuous improvement was important while 64.4% and 45.7% found achieving uniformity and learning other processes as unimportant. 61.9% felt that benchmarking to set internal standards was neither important nor important. Means were computed from the responses and the highest means were on the need to benchmark in order to maintain

Table 2: Reasons for Benchmarking-Public Universities

Reasons for Benchmarking	Mean	MI (%)	I (%)	N (%)	U (%)	HU (%)
Maintain competitive advantage	(4.33)	49.0	33.5	16.8	0	0
Public concern for academic standards	(4.10)	27.1	56.1	14.8	1.3	0
Achieve continuous improvement	(3.73)	3.2	67.1	27.7	1.3	0
Learn other processes	(2.18)	0	1.3	36.8	40.0	21.3
Achieve uniformity	(2.18)	0	1.3	35.5	41.9	20.6
To set internal standards	(3.16)	.6	25.8	61.9	11.0	0
Enhanced learning	(3.20)	.6	33.5	49.7	15.5	0

KEY: MI-Most important, I-Important, N-Neutral, U-Unimportant, HU-Highly Unimportant

competitive advantage (4.33) and public concern for quality at 4.10. Benchmarking in order to learn other processes and achieve uniformity scored the least mean at 2.18. The Average Mean Score (AMS) for public universities was 3.27.

In the private universities 51.1% found maintaining competitive advantage as important followed by 48.9% who felt public concern for academic standards was important. 64% and 46.7%, respectively found achieving uniformity and learning other processes as unimportant while 60% felt that benchmarking to set internal standards was neither important nor important. Means computed from the responses indicated highest mean of 3.85 on the need to benchmark in order to maintain competitive advantage, public concern for quality (3.64), achieving continuous improvement (3.43). Benchmarking in order to learn other processes and achieve uniformity scored means of 2.34 and 2.23, respectively while the average mean score was 3.12. This corroborates with Magutu *et al.* (2011) who found that public universities in Kenya benchmarked for continuous improvement, development and improvement. Magd (2008) while researching

Egyptian organizations indicated that the most important reasons for initiating benchmarking were to maintain and increase competitive advantage, increased profitability and achieve continuous improvement.

Success of Benchmarking

When respondents were asked to assess the success of benchmarking in public universities, majority 92.9% believed it had led to customer satisfaction, 90.9% felt it had been successful as a strategic tool, while 90.3% felt it was successful as a tool for assessment and improvement of performance. 53.9% of respondents saw improvement of people management as unsuccessful, 48.1% considered setting of internal standards as unsuccessful, while 53.2% felt growth potential as a benefit of benchmarking was neither successful nor unsuccessful. The mean scores confirm these findings with the highest being 4.29 (tool for assessment and improvement of performance) 4.27 (strategic tool), and 4.14 (improved customer satisfaction). The least mean score came from improvement of people management at 2.42. The AMS was 3.40.

Table 3: Reasons for benchmarking-Private Universities

Reasons for Benchmarking	Mean	MI (%)	I (%)	N (%)	U (%)	HU (%)
Maintain competitive advantage	3.85	42.2	8.9	37.8	6.7	2.2
Public concern for academic standards	3.64	20.0	28.9	42.2	6.7	0
Achieve continuous improvement	3.43	6.7	35.6	48.9	6.7	0
Learn other processes	2.3	40	0	51.1	28.9	17.8
Achieve uniformity	2.2	30	0	33.3	53.3	11.1
To set internal standards	3.0	70.5	22.2	60.0	15.6	0
Enhanced learning	3.26	2.2	46.7	44.4	4.4	0

KEY: MI-Most important, I-Important, N-Neutral, U-Unimportant, HU-Highly Unimportant

Table 4: Elements of benchmarking -Public

Elements of benchmarking -Public	Mean	GE (%)	SE (%)	M (%)	SE (%)	VSE (%)
Continuous practice	3.66	18.2	41.6	29.2	9.7	1.3
Systematic/consistent methodology	3.46	6.5	46.1	38.3	5.2	3.9
Actions are implemented	3.64	14.9	48.1	25.3	9.7	1.9
Best practices are identified	3.82	20.8	52.6	16.9	7.8	1.9
Teamwork is adopted	3.37	13.0	37.0	27.3	19.5	3.2
Linked with quality management practices	3.55	12.3	42.9	33.1	11.0	0.6

KEY: GE-Great Extent ,SE-Some extent, M-Moderate extent, SE-Small extent, VSE-Very small extent

Table 5: Elements of benchmarking -Private

Elements of benchmarking -Private	Mean	GE (%)	SE (%)	M (%)	SE (%)	VSE (%)
Continuous practice	3.72	4.5	63.6	31.8	0	0
Systematic/consistent methodology	3.48	4.5	40.9	52.3	2.3	0
Actions are implemented	3.45	0	54.5	36.4	9.1	0
Best practices are identified	3.70	4.5	63.6	29.5	2.3	0
Teamwork is adopted	3.09	0	31.8	52.3	9.1	6.8
Linked with quality management practices	3.07	0	29.5	50.0	18.2	2.3

KEY: GE-Great extent , SE-Some extent, M-Moderate extent, SE-Small extent, VSE-Very small extent

In the private universities, 77.3.3% felt it had been successful for quality improvement, as a strategic tool and leading to quality improvement at 75%. 61.4% of respondents saw improvement of people management as unsuccessful while 56.8% felt growth potential as a benefit of benchmarking was neither successful nor unsuccessful. The mean scores confirm these findings with the highest being 3.95 (quality improvement) 3.81 (strategic tool), and 3.72 (tool for assessment and improvement of performance). The least mean score came from improvement of people management at 2.22. The average mean score was 3.21 slightly lower than

public universities indicating less competitive advantage for the private universities.

Earlier studies by Andersen (1999) found competitive benchmarking as being useful when comparing performance levels and strategies while Jarrar and Zairi (2001) found that in UK universities benchmarking benefits included process improvement, setting internal standards and quality improvement. This concurs with findings by Magd (2008) who found that respondents considered highly improved customer satisfaction and quality improvement while those considered low by respondents were innovative approaches and improved people

Table 6: Success of Benchmarking- Public

Success of Benchmarking Public	Mean	HS(%)	S(%)	N(%)	U(%)	HU(%)
Strategic tool	4.27	39.0	51.9	7.1	1.3	0.6
Growth Potential	3.02	1.3	24.7	53.2	16.2	4.5
Tool for assessment and improvement of performance	4.29	43.5	46.8	5.2	3.9	0.6
Tool for continuous improvement	3.25	3.2	44.2	31.2	17.5	3.9
Improved customer satisfaction	4.14	24.7	68.2	4.5	1.3	1.3
Process improvement	3.10	2.6	31.2	43.5	18.8	3.9
Quality improvement	3.94	24.7	51.3	17.5	5.8	0.6
Setting of internal standards	2.56	1.3	14.9	35.7	35.1	13.0
Innovative Approaches	2.98	0.6	35.7	29.2	29.9	4.5
Improvement of people management	2.42	0.6	12.3	33.1	36.4	17.5

KEY: HS-Highly successful, S-Successful, N-Neutral, U-Unsuccessful, HU-Highly Unsuccessful.

management. This indicates little regard that universities have for its human resource. Attiany (2009) also found a high correlation between benchmarking and continuous improvement in Jordanian pharmaceutical firms.

Elements of Benchmarking

Respondents were asked to indicate the extent to which various elements of benchmarking were present in their universities. From the responses in public universities, 73.4% felt identification of best practices was present to a great extent so was implementation of benchmarking activities at 62%. Adoption of teamwork was considered present to a small extent by 22.7% while 38.3% considered systematic benchmarking as moderately present. The highest mean was recorded by identification of best practices (3.82), benchmarking as a continuous practice (3.66), implementation of actions (3.64) while the least mean was recorded by adoption of teamwork at 3.37. The average mean score was 3.58.

In private universities, 68.1% felt identification of best practices and benchmarking as a continuous practice was present to a great extent. Linking benchmarking to quality management systems was considered present to a small extent by 20.5% of respondents while 52.3% considered systematic benchmarking and adoption of teamwork as moderately present. The highest mean was recorded by benchmarking as a continuous practice (3.72), identification of best practices (3.70), systematic and consistent methodology (3.48) while the least mean was recorded by linking benchmarking to quality management practices at 3.07. The average mean score was 3.42 which indicated the extent to which elements of benchmarking were present in public universities was greater than in private universities.

This collaborates with Demirbag *et al.* (2006) who suggests that most organizations have adopted Total Quality Management (TQM), a

Table 7: Success of Benchmarking- Private

Success of Benchmarking Private	Mean	HS(%)	S(%)	N(%)	U(%)	HU(%)
Strategic tool		3.82	20.5	54.5	13.6	9.1 2.3
Growth Potential		2.98	0	20.5	56.8	22.7 0
Tool for assessment and improvement of performance	3.73	11.4	63.6	15.9	4.5	4.5
Tool for continuous improvement		2.91	0	22.7	45.5	31.8 0
Improved customer satisfaction		3.59	4.5	59.1	29.5	4.5 2.3
Process improvement		3.23	0	43.2	40.9	11.4 4.5
Quality improvement		3.95	20.5	56.8	20.5	2.3 0
Setting of internal standards		2.57	1.0	9.1	52.3	25.0 13.6
Innovative Approaches		3.11	2.3	31.8	45.5	15.9 4.5
Improvement of people management		2.23	0	2.3	36.4	43.2 18.2

KEY: HS-Highly successful, S-Successful, N-Neutral, U-Unsuccessful, HU-Highly Unsuccessful.

holistic management philosophy aimed at continuous improvement in all functions of an organization. In a study carried out by Sajjad and Amjad (2012) within the Telecom sector of Pakistan, benchmarking was found to be a pillar of total quality management and its adoption significantly linked to TQM. This corroborates with Magutu *et al.* (2011) also concurred that public universities in Kenya carried out benchmarking as a continuous practice.

Effect of Benchmarking on Competitive Advantage

Respondents were asked to indicate level of competitive advantage in their universities and those in public universities responded as follows; 88.9% and 84.1% felt that the university had been successful in attaining competitiveness by attracting best academicians and undergraduates and enjoying substantial funding/linkages with industry. 22.7% of the respondents took a neutral stand regarding the university having international

networks and alliances while 5.1% felt the universities had been unsuccessful in having and using international networks and alliances. Means obtained reflect a similar trend with attracting best academicians and undergraduates as well as enjoying substantial funding and linkages recording 4.09 and 4.03, respectively. The lowest mean was recorded by universities having and using international networks and alliances and producing well qualified graduates at 3.89. the average mean score was 3.99.

In the private universities 63.2% felt that the university had been successful in attaining competitiveness by introducing a number of competitive programs, 63.6 felt that the university had been successful in achieving using international networks and alliances. 47.7% of the respondents took a neutral stand regarding the university being an excellent research institution while 6.8% felt the universities had been unsuccessful in using international networks and

Table 8: Competitive Advantage- Public

Competitive Advantage	Mean	HS (%)	S (%)	N (%)	U (%)	HU (%)
Low student faculty ratio	4.00	18.8	65.5	13.0	1.9	0.6
Large number of competitive programs	3.99	23.4	56.5	15.6	4.5	0
Excellent research institution	4.01	18.8	64.9	14.9	1.3	0
Attracts best academicians and undergraduates	4.09	20.1	68.8	9.7	1.3	0
Enjoys substantial funding/linkages	4.03	20.8	63.3	14.3	1.9	0
Has/uses international networks and alliances	3.89	23.4	48.7	22.7	4.5	0.6
Produces well qualified graduates	3.89	17.5	59.1	18.2	5.2	0

KEY: HS-Highly successful, S-Successful, N-Neutral, U-Unsuccessful, HU-Highly Unsuccessful

Table 9: Competitive Advantage- Private

Competitive Advantage	Mean	HS (%)	S (%)	N (%)	U (%)	HU (%)
Low student -faculty ratio	3.52	0	59.1	36.4	2.3	2.3
Large number of competitive programs	3.70	6.8	56.8	36.4	0	0
Excellent research institution	3.52	4.5	45.5	47.7	2.3	0
Attracts best academicians and undergraduates	3.52	2.3	52.3	40.9	4.5	0
Enjoys substantial funding/linkages	3.64	9.1	47.7	40.9	2.3	0
Has/uses international networks and alliances	3.57	0	63.6	29.5	6.8	0
Produces well qualified graduates	3.52	6.0	43.2	45.5	4.5	0

KEY: HS-Highly successful, S-Successful, N-Neutral, U-Unsuccessful, HU-Highly Unsuccessful

alliances. Means obtained were as follows; 3.70 (large number of competitive programs), (3.64) enjoys substantial funding and linkages, (3.57) has/uses international networks and alliances, while the least was 3.52 (low student -faculty ratio, excellent research institution, attracts best academicians and undergraduates and produces well qualified undergraduates). The average mean score was 3.57 an indication of low competitive advantage than public universities.

This indicates that majority of respondents considered their universities competitive and agrees with findings by Attiany (2014) who found that benchmarking had a significant and positive impact on achieving competitive advantage. This was further reinforced by a linear regression analysis of the effect of benchmarking on competitive advantage.

R^2 for the model is 0.109, 10.3% of predicting power.

Table 10: Summary of Regression Analysis Coefficient for Public and Private Universities

Coefficients	Benchmarking (Public universities)	Benchmarking (Private universities)
Sig	0.000	0.041
R ²	0.109	0.095
F	18.564	4.424
(Constant)	15.6110.390	15.2850.473
Beta	0.330	0.309

Model F(1,154) = 18.564, p < 0.000 for public universities
 R2 for the model is 0.109, 10.3% of predicting power.
 Y = 15.611 – 0.390X1 (benchmarking)

$$Y = 15.611 - 0.390X_1 \text{ (benchmarking)}$$

Y is the dependent variable competitive advantage. 15.611 is the constant place where the regression equation crosses the Y axis and X1 is the independent variable benchmarking index. Equation of the fitted model using standard coefficient is $Y = 0.330X_1$ where Y is competitive advantage, X1 is benchmarking. An increase in one unit of benchmarking increases competitive advantage by 0.330. Benchmarking therefore positively influences competitive advantage in public universities.

Hypothesis 1a: There is no significant influence of benchmarking practices on competitive advantage in Kenyan public universities.

The significance level 0.000 was less than 0.5 p-value thus we reject the null hypothesis.

Model F(1,44) = 4.424, p < 0.041 for Private universities.

R2 for the model is 0.095, 9.5% of predicting power.

$$Y = 15.285 - 0.473X_1 \text{ (benchmarking)}$$

Y is the dependent variable competitive advantage. 15.285 is the constant place where

the regression equation crosses the Y axis and X1 is the independent variable benchmarking index. Equation of the fitted model using standard coefficient is $Y = 0.309X_1$ where Y is competitive advantage, X1 is benchmarking. An increase in one unit of benchmarking increases competitive advantage by 0.309. Benchmarking therefore positively influences competitive advantage in private universities.

Hypothesis 1b: There is no significant influence of benchmarking practices on competitive advantage in Kenyan private universities.

The significance level 0.041 was less than 0.5 p-value, thus the null hypothesis is rejected. The conclusion is that both public and private universities in Kenya have applied benchmarking practices to achieve competitive advantage though the private universities to a greater extent than the public universities. This finding is consistent with the previous studies by Brah *et al* (2000), and Kumar and Chandra (2001) who established that organizations benchmark to increase and maintain competitive advantage while according to Sorensen *et al* (2005) benchmarking provides every institution a tool to remain competitive.

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